razberi technologies

5 Megapixel, 360 View IR Mini-Dome

LP500-360

User Manual

9.20.2012

Table of Contents

1. Overview 2

1.1 Features 2

1.2 Package Contents 3

1.3 Connectors 4

1.4 Cable Definition (Optional) 5

2. Camera Cabling 6

2.1 Connect Power 6

2.2 Connect Ethernet Cable 6

3. System Requirements 7

4. Camera Access 8

5. Setup Video Resolution 13

6. Configuration Files Export / Import 14

Appendix A: Technical Specifications 15

Appendix B: Delete the Existing DC Viewer 17

Appendix C: Setup Internet Security 18

1. Overview

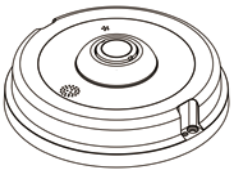
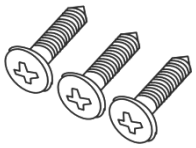
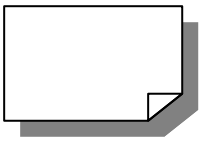
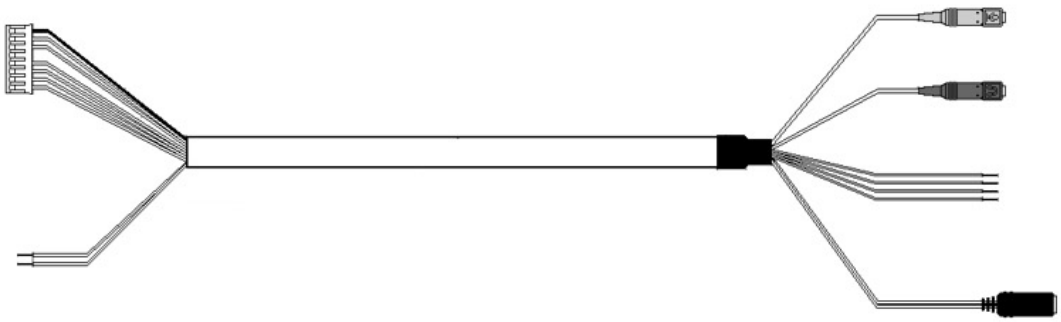
The LP500-360 mini-dome camera is designed to provide cost effective panoramic (180°) or surround view (360°) of wide open areas. Packaged in a discrete, low profile enclosure, the 5 Megapixel CMOS progressive scan sensor provides a high density of pixels to reduce the number of cameras required to cover a wide field of view. The LP500-360 is compatible with the user-friendly razberi™ ServerSwitch NVR for quick plug-and-play installation.

1.1 Features

i. Progressive Scan CMOS Sensor
ii. 5M resolution
iii. Dual Streams, Full HD 1080P real-time + D1 real-time
iv. Quad Streams support
v. Quad Streams Compression:
   H.264 Baseline / Main / High Profile + MJPEG
vi. 360° Panorama View
vii. ePTZ
viii. Quad View
ix. Tampering Alarm
x. Wide Dynamic Range
xi. Motion Detection
xii. Privacy Masks
xiii. Day / Night (ICR)
xiv. IR LED Module
xv. Built-in MIC & Speaker
xvi. Micro SD support
xvii. ONVIF support

1.2 Package Contents

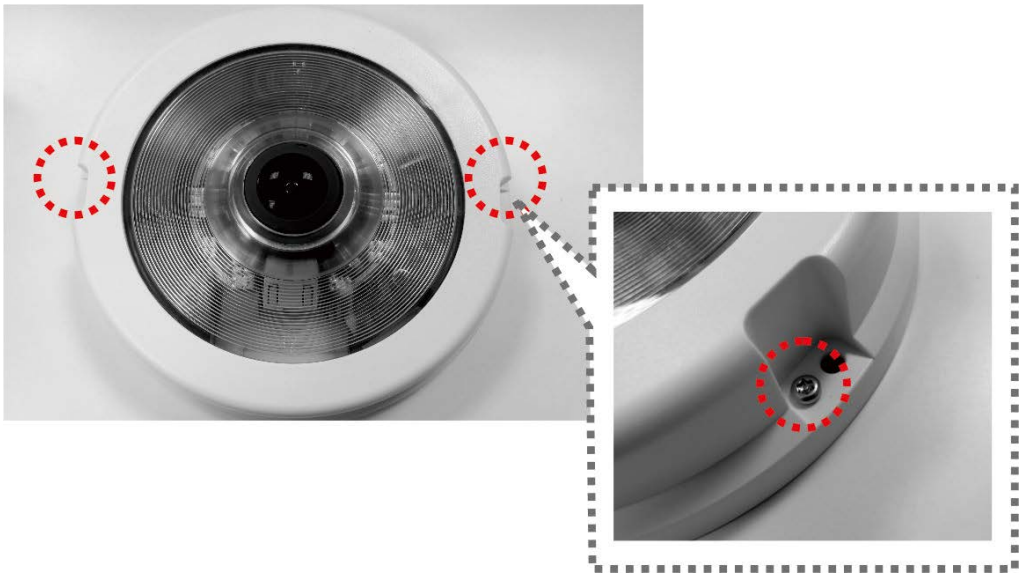
Please verify that the package contains the following items listed below.

 LP500-360	 Self-tapping screws (x3)	Plastic Anchors (x3)	Security Screw (x1)
Security Torx	Power Terminal Block (x1)	 Quick Guide	CD
 All In One Cable (Optional)			

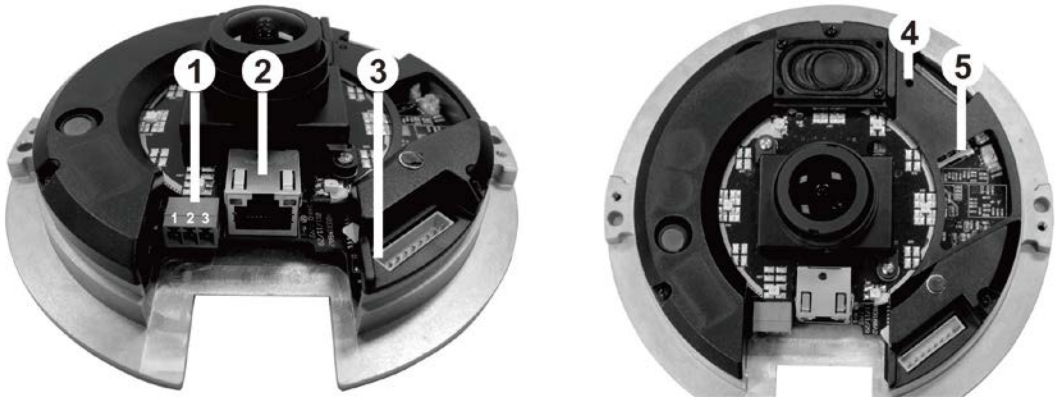
NOTE: The supplied self-tapping screws are mainly for softer substrate / material installation such as wood. For other installation environments such as cement wall, it is required to pre-drill and use plastic anchors before fastening the supplied self-tapping screw on the wall.

1.3 Connectors

Please remove the security screws and the cover to reach the connectors.



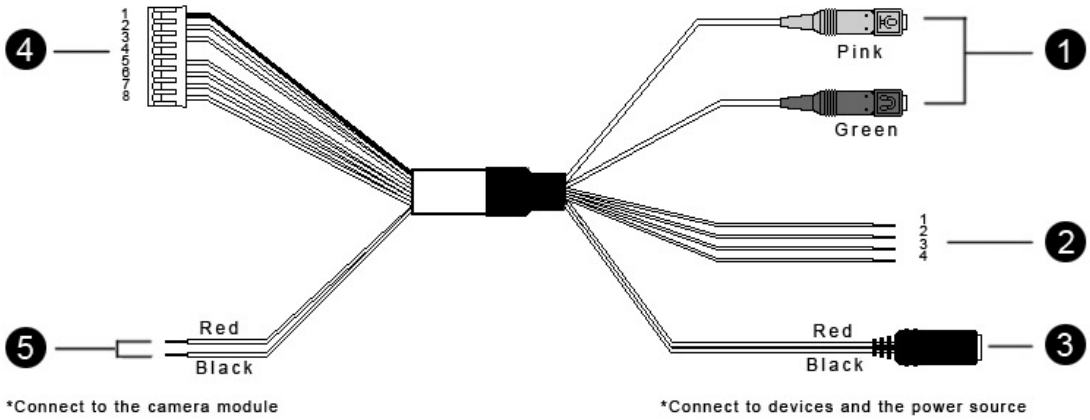
The diagram below shows the LP500-360 connectors and reset button.



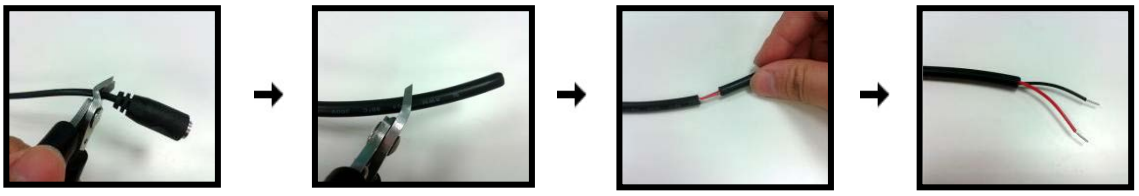
No.	Connector		Pin	Definition	Remarks
1	**Power***	**DC 12V**	1	Power	Power connection
			2	Reserved	
			3	GND	
		AC 24V	1	Power-1	
			2	Earth GND	
			3	Power-2	
2	**RJ-45**		-	10/100 Mbps Ethernet / PoE	
3	**Alarm & Audio I/O***		-	Alarm & Audio I/O	
4	**Reset Button**		-	Restore to default setting Press the button with a proper tool	
5	**Micro SD Card Slot**		-	For video recording storage	

*All in One Cable is required for Power, Alarm and Audio I/O utilization.

1.4 Cable Definition (Optional)



No.	Connector	Pin	Definition	Remarks
1	**Audio I/O**	Pink	Line In	Two-way audio transmission
		Green	Line Out	
2	**Alarm (4-Pin Terminal Block)**	1	ALM_IN –	Alarm connection
		2	ALM_IN +	
		3	ALM_OUT –	
		4	ALM_OUT +	
3	**Power DC Jack**	-	DC 12V	Power connection
	Power Wires	Red	AC 24V (+)	Remove DC Jack connector head, and apply AC 24V with Red and Black wires (as shown in the diagrams below).
		Black	AC 24V (–)	
4	**Alarm & Audio I/O**	1	GND	Two-way audio transmission / Alarm connection
		2	Line In	
		3	Line Out	
		4	-	
		5	ALM_IN –	
		6	ALM_IN +	
		7	ALM_OUT –	
		8	ALM_OUT +	
5	**Power Wires**	Red	DC 12V (+) / AC 24V (+)	Power connection
		Black	DC 12V (–) / AC 24V (–)	



2. Camera Cabling

Please follow the instructions below to complete LP500-360 connection.

2.1 Connect Power

Please refer to Section: Connectors. Alternatively, connect the Ethernet cable to the camera's RJ-45 port and plug the other end of the cable into a PoE switch.

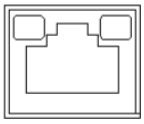
NOTE: If using PoE, make sure Power Sourcing Equipment (PSE) is in use in the network.

2.2 Connect Ethernet Cable

Use of Category 5 Ethernet cable is recommended for the network connection. Cable length shall not exceed 100 meters. Connect one end of the Ethernet cable to the RJ-45 connector of the LP500-360, and the other end of the cable to the network switch, PC or Razberi ServerSwitch.

NOTE: In some cases, you may need use an Ethernet crossover cable when connecting the LP500-360 directly to the PC.

Check the status of the link indicator and activity indicator LEDs; if the LEDs are unlit, please check LAN connection.



Green Link Light indicates good network connection.
Orange Activity Light flashes for network activity indication.

3. System Requirements

To access the LP500-360 via web browser, please ensure your PC has a good network connection and meets the minimum requirements as described below.

Items	System Requirement
Personal Computer	**Minimum :** 1. Intel® Core™ i5-2430M @ 2.4 GHz 2. 4 GB RAM
	Recommended: 1. Intel® Core™ i7-870 @ 2.93 GHz 2. 8 GB RAM
Operating System	Windows VISTA / Windows XP / Windows 7
Web Browser	Microsoft Internet Explorer 6.0 or later Firefox Chrome Safari
Network Card	10Base-T (10 Mbps) or 100Base-TX (100 Mbps) operation
Viewer	ActiveX control plug-in for Microsoft IE

4. Camera Access

For initial access to the LP500-360, users can search the camera through the installer program: DeviceSearch.exe, which can be found in “DeviceSearch” folder in the supplied CD.

Device Search Software Setup

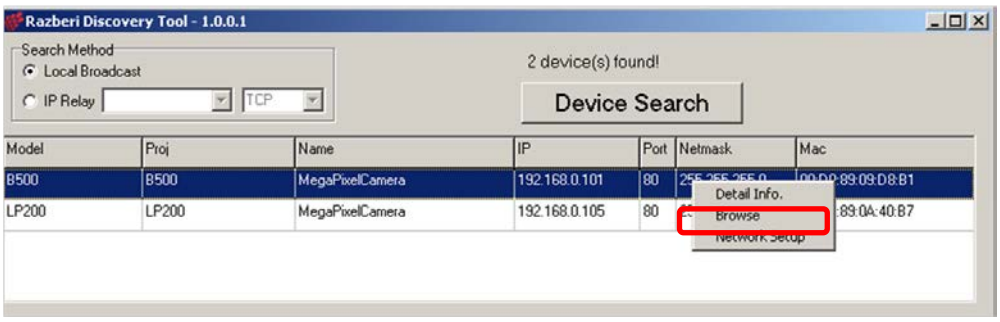
Step 1: Double click on the program Device Search.exe. After its window appears, click on the <Device Search> button on the top side.

Step 2: The security alert window will pop up. Click on <Unblock> to continue.

Device Search

Step 3: Click on <Device Search> again, and all the discovered IP devices will be listed in the page. The LP500-360’s default IP address is: **192.168.0.250**.

Step 4: Double click or right click and select <Browse> to access the camera directly via web browser.



Step 5: Enter the default username and password at the prompt.

The default login ID and password for the Administrator are:

Login ID	Password
Admin	1234

NOTE: ID and password are case sensitive.

NOTE: It is strongly advised that administrator's password be altered for the security concerns. Refer to Full HD Multiple Streams IP Camera Menu Tree for further details.

Additionally, users can change the IP Camera's network properties to either DHCP or Static IP. Refer to the following section for changing the LP500-360 network properties.

Changing LP500-360 Network Properties

Users can change an LP500-360's network properties, ex. from static IP to DHCP in the discovered device list:

Step 1: In the discovered device list, click on the LP500-360 to change its network properties. On the selected camera, right click "Network Setup." Meanwhile, record the LP500-360's MAC address, for future identification.

Step 2: The "Network Setup" page will appear. Select "DHCP," and press the "Apply" button.

Step 3: Click on <OK> . Wait for one minute to re-search the LP500-360.

Step 4: Click on the <Device Search> button to search all the devices. Then select the LP500-360 with the correct MAC address. Double click on the LP500-360, and the login window will appear..

Step 5: Enter User name and Password to access the LP500-360.

Installing DC Viewer Software Online

For the initial access to the LP500-360, a client program, DC Viewer, will be automatically installed to your PC when connecting to the LP500-360.

If the Web browser doesn't allow DC Viewer installation, please check the Internet security settings or ActiveX controls and plug-ins settings (refer to Section: Setup Internet Security) to continue the process.

The Information Bar (just below the URL bar) may come out and ask for permission to install the ActiveX Control for displaying video in the browser. Right click on the Information Bar and select <Install ActiveX Control…> to allow the installation.

The download procedure of DC Viewer software is specified as follows.

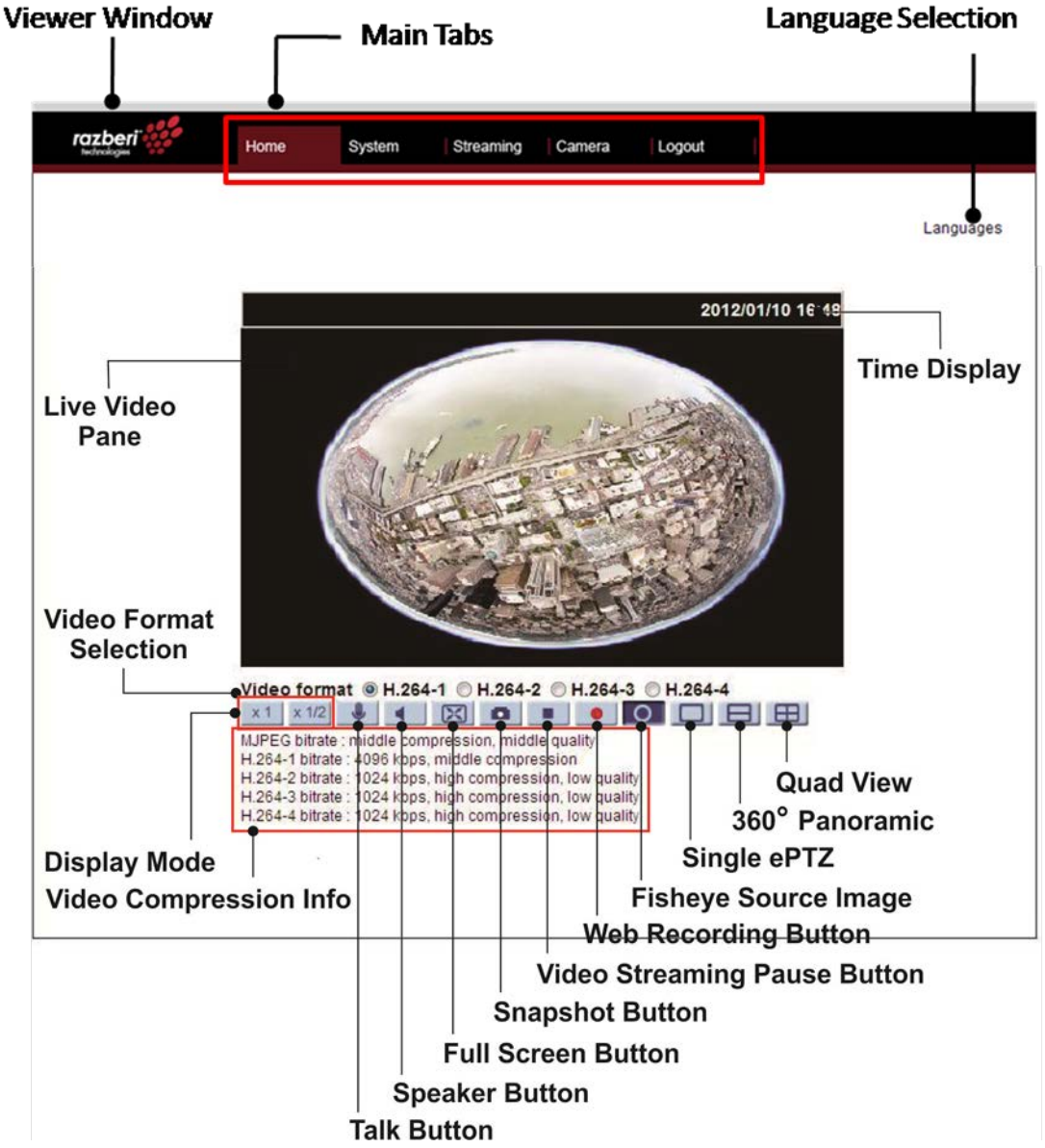
Step 1: In the DC Viewer installation window, click on <Next> to start installation.

Step 2: The status bar will show the installation progress. After the installation is completed, click on <Finish> to exit the installation process.

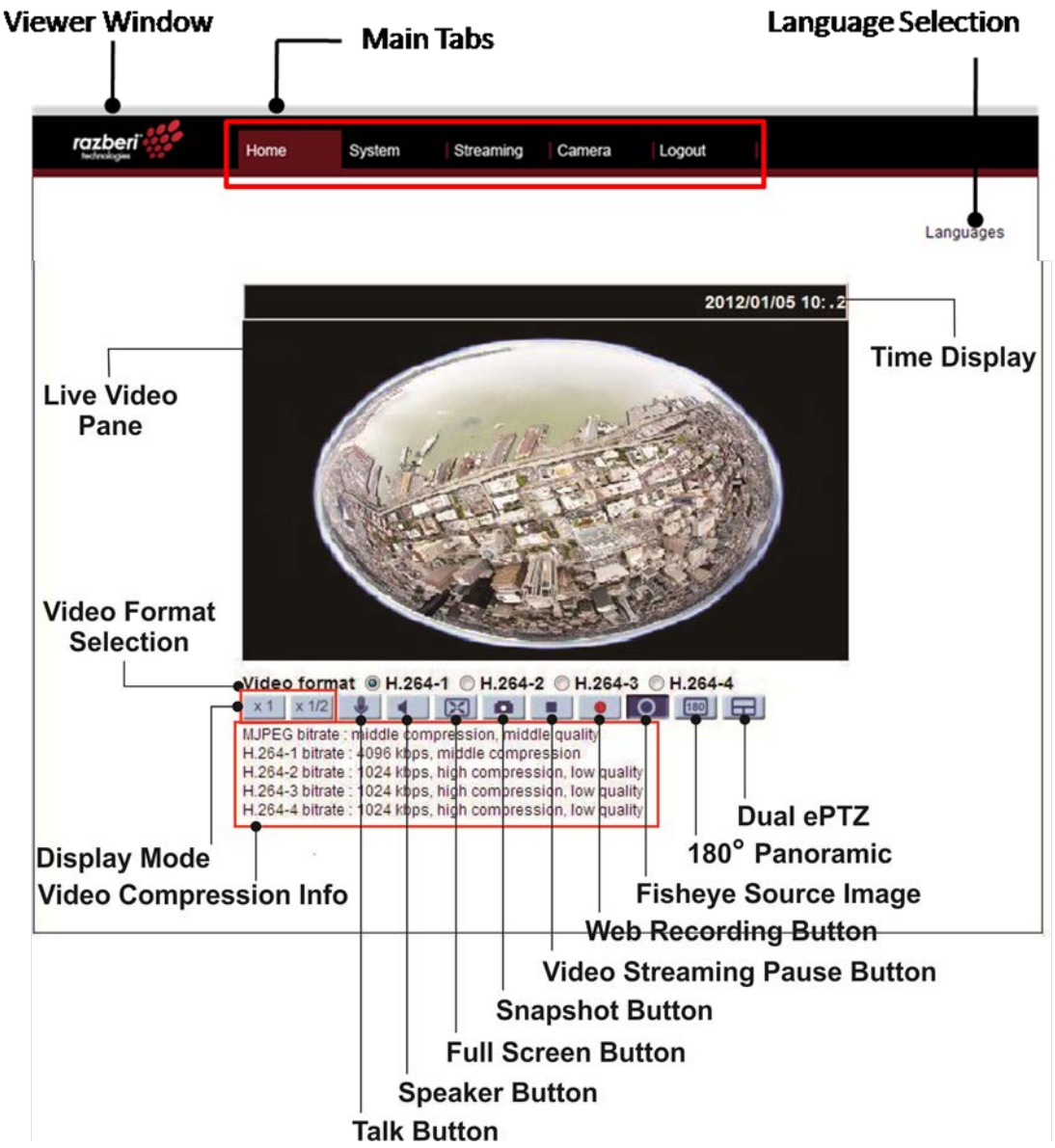
Step 3: Click on <Finish> to close the DC Viewer installation page.

Once the DC Viewer is successfully installed, the LP500-360's Home page will be able to correctly display as shown below.

Ceiling Mount Installed Camera



Wall Mount Installed Camera

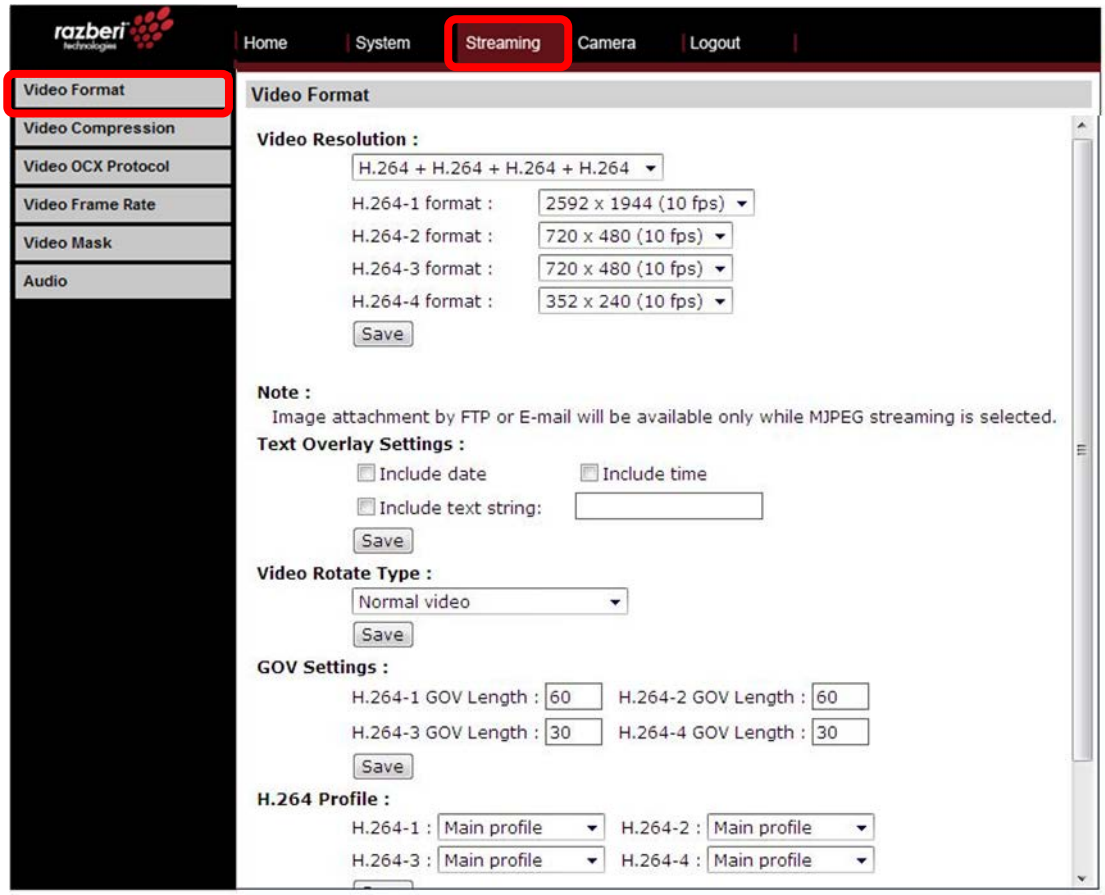


Note: Please refer to Full HD Multiple Streams LP500-360 Menu Tree for more button function detail.

5. Setup Video Resolution

Users can setup Video Resolution on Video Format page of the user-friendly browser-based configuration interface.

Video Format can be found under this path: **Streaming> Video Format**.



The default value of Video Resolution is: H.264 2592 x 1994 (10 fps) + H.264 720 x 480 (10 fps). For more Video Resolution combination detail, please refer to Appendix: Video Resolution. Click on <Save> to confirm the setting.

6. Configuration Files Export / Import

To export / import configuration files, users can access the Maintenance page on the user-friendly browser-based configuration interface.

The Maintenance setting can be found under this path: **System> Maintenance**.

Users can export configuration files to a specified location and retrieve data by uploading an existing configuration file to the LP500-360.

Export

Users can save the system settings by exporting the configuration file (.bin) to a specified location for future use. Click on the <Export> button, and the popup File Download window will come out. Click on <Save> and specify a desired location for saving the configuration file.

Upload

To copy an existing configuration file to the LP500-360, please first click on <Browse> to select the configuration file, and then click on the <Upload> button for uploading.

Appendix A: Technical Specifications

Camera		**W8**
Image Sensor		5M Progressive CMOS
Effective Pixels		2592(H) x 1944(V)
Minimum illumination		0.2 lux (Color) @ F2.8 0.02 lux (B/W) @ F2.8
White Balance		Manual / AWB / ATW
Shutter Speed		1 ~ 1/10k sec.
Lens		
Lens	Stereo Projection Type	1/2.5" Fisheye Lens
Focal Length		1.05 mm
F Number		F2.8
FOV		180° @ Full Resolution
Operation		
Multiple Languages		English / French / German / Italian / Korean / Simplified Chinese / Traditional Chinese / Russian
Image Setting	Backlight Compensation	On / Off
	White Balance	Auto / Manual
	Noise Reduction (3D)	On / Off
	Wide Dynamic Range	On / Off
	Privacy Mask	On / Off
	Brightness	Manual
	Exposure	Auto / Manual
	Sharpness	Manual
	Contrast	Manual
	Saturation	Manual
	Hue	Manual
	Digital Zoom	Support
	Motion detection	On / Off
	Privacy Mask Type	Color
	ICR	Auto / LED On / LED Off / Smart IR / Light Sensor
	Tampering Alarm	On / Off
Audio	Type	Built-in Speaker (Max. 2W Mono) / Microphone or Two-way Audio (Line in / Line out)*
	Compression	G.711 / G.726
Network		
Interface		RJ-45, 10/100 Mbps Ethernet
Video Compression		H.264 Baseline / Main Profile / High Profile / MJPEG
Video Streaming		Single Stream: 2592 x 1944 (10 fps)
		Single Stream: 2048 x 1536 (15 fps)
		Simultaneous H.264 1080p (25/30 fps) + MJPEG D1 (25/30 fps)
		Simultaneous H.264 1080p (25/30 fps) + H.264 D1 (25/30 fps)
		Quad Streams
Video Resolution	H.264	5M (2592 x 1944) / 3M (2048 x 1536) / Full HD 1080P / SXGA / HD 720P / XGA / SVGA / D1 / VGA / CIF
	MJPEG	Full HD 1080P / SXGA / HD 720P / XGA / SVGA / D1 / VGA / CIF
Protocol		IPv4/v6, TCP/IP, UDP, RTP, RTSP, HTTP, HTTPS, ICMP, FTP, SMTP, DHCP, PPPoE, UPnP, IGMP, SNMP, QoS, ONVIF
Security		HTTPS / IP Filter / IEEE 802.1x
Alarm*	Input	1 Set 5V 10kΩ pull up
	Output	1 Set Photo Relay Output 300V DC / AC
Event Notification		HTTP / FTP / SMTP
Micro SD		microSDHC 32GB support
Supported Web Browser		Internet Explorer (6.0+) / Chrome / Firefox / Safari
User Account		20
Password Levels		User and Administrator

Mechanical		
Built-in IR Illuminator	Working Distance	5 m
	Wavelength	850 nm
	Number of LEDs	6
Lens Mounting		M12 Fisheye Lens
Connectors	Alarm & Audio	8 Pin Terminal Block, Pitch 2.5 mm
	Power	3 Pin Terminal Block
	Ethernet	RJ-45
All in one Cable*		
Audio I / O		Line in / Line Out
Alarm		4 Pin Wire Cables
Power	DC 12V	DC Jack
	AC 24V	Power Wire Cables AC 24V (+), AC 24V (-)
General		
Operating Temperature		-10°C ~ 50°C (14°F ~ 122°F)
Humidity		10% ~ 90%, No Condensation
Weatherproof Standard		Rugged Camera- IP66
Dimension		Ø 149 x 45.8 mm (Ø 5.87 x 1.80 in.)
Weight		350 g (0.77 lbs)
Power Source		DC 12V* / AC 24V* / PoE
Power Consumption		Max. 12W
Regulatory		CE / FCC / RoHS

(*) Optional

Appendix B: Delete the Existing DC Viewer

For users who have installed the DC Viewer in the PC previously, please first remove the existing DC Viewer from the PC before accessing the LP500-360.

Deleting the DC Viewer

In the Windows <Start Menu>, activate <Control Panel>, and then double click on <Add or Remove Programs>. In the <Currently installed programs> list, select <DCViewer> and click on the button <Remove> to uninstall the existing DC Viewer.

Deleting Temporary Internet Files

To improve browser performance, it is suggested to clean up the all the files in the Temporary Internet Files.

The procedure is as follows:

Step 1: Click on the <Tools> tab on the menu bar and select <Internet Options>.

Step 2: Click on the <Delete> button under <Browsing history> section. Then click on the <Delete Files> button under the <Temporary Internet files> section.

Step 3: A confirmation window will pop up. Click on <Yes> to start deleting the files.

Appendix C: Setup Internet Security

If ActiveX control installation is blocked, please either set Internet security level to default or change ActiveX controls and plug-ins settings.

Internet Security Level: Default

Step 1: Start the Internet Explorer (IE).

Step 2: Click on the <Tools> tab on the menu bar and select <Internet Options>.

Step 3: Click on the <Security> tab, and select <Internet> zone.

Step 4: Down the page, click on the <Default Level> button and click on <OK> to confirm the setting. Close the browser window, and restart a new one later to access the IP Camera.

ActiveX Controls and Plug-ins Settings

Step 1: Repeat **Steps 1~3** of the previous section above.

Step 2: Down the page, click on the <Custom Level> button to change ActiveX controls and plug-ins settings. The Security Settings window will pop up.

Step 3: Under <ActiveX controls and plug-ins>, set **ALL** items (as listed below) to <Enable> or <Prompt>. Please note that the items vary by IE version.

ActiveX controls and plug-ins settings:

1. Allow previously unused ActiveX controls to run without prompt.
2. Allow Scriptlets.
3. Automatic prompting for ActiveX controls.
4. Binary and script behaviors.
5. Display video and animation on a webpage that does not use external media player.
6. Download signed ActiveX controls.
7. Download unsigned ActiveX controls.
8. Initialize and script ActiveX controls not marked as safe for scripting.
9. Run ActiveX controls and plug-ins.
10. Script ActiveX controls marked safe for scripting.

Step 4: Click on <OK> to accept the settings and close the Security Settings window.

Step 5: Click on <OK> to close the Internet Options screen.

Step 6: Close the browser window, and restart a new one later to access the LP500-360.